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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/901,782	07/09/2001	Susan Hardin	0007/01UTL	9388

7590 04/28/2006

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EXAMINER
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SMITH, CAROLYN L

ART UNIT	PAPER NUMBER
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1631

DATE MAILED: 04/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/901,782

Applicant(s)

HARDIN ET AL.

Examiner

Carolyn L. Smith

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 10,13-19 and 50-56 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 10,13-18 and 50-55 is/are rejected.
- 7) ☒ Claim(s) 19 and 56 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

### **DETAILED ACTION**

Applicant is advised that the Notice of Allowance mailed 2/10/06 is vacated. If the issue fee has already been paid, applicant may request a refund or request that the fee be credited to a deposit account. However, applicant may wait until the application is either found allowable or held abandoned. If allowed, upon receipt of a new Notice of Allowance, applicant may request that the previously submitted issue fee be applied. If abandoned, applicant may request refund or credit to a specified Deposit Account.

Prosecution on the merits of this application is reopened on claims 10, 13-19, and 50-56 in view of the new rejections set forth below:

#### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 10, 13-18, and 50-55 are rejected under 35 U.S.C. 102(e) as being anticipated by Korlach et al. (US 2006/0078937 A1).

Korlach et al. disclose a composition comprising a polymerizing agent including a molecular tag covalently bonded to a site on the polymerizing agent and a monomer including a molecular tag, where at least one of the tags has a fluorescence property that undergoes a change before, during and/or after each of a sequence of monomer incorporations due to an interaction between the polymerizing agent tag and the monomer tag (claim 62), as stated in instant claim 10. Korlach et al. disclose a composition wherein the polymerizing agent is a polymerase or reverse transcriptase (claim 63), as stated in instant claim 13. Korlach et al. disclose a composition wherein the polymerase is selected from the group of Taq DNA polymerase, T7 DNA polymerase, Sequenase, and the Klenow fragment from E. coli DNA polymerase (claim 64), as stated in instant claim 14. Korlach et al. disclose a composition wherein the reverse transcriptase comprises HIV reverse transcriptase (claim 65), as stated in instant claim 15. Korlach et al. disclose a composition wherein each of the monomers comprises a deoxynucleotide triphosphate (dNTP) and the monomer tag is covalently bonded to the  $\beta$  or  $\gamma$  phosphate group of each dNTP (claim 66), as stated in instant claim 16. Korlach et al. disclose a composition wherein the tags comprise fluorescent tags, and the fluorescence property comprises an intensity, wavelength, and/or frequency of emitted fluorescent light (claim 67), as stated in instant claim 17. Korlach et al. disclose a composition wherein the fluorescence property is fluorescence resonance energy transfer (FRET) where either the monomer tag of the polymerase tag comprises a donor and the other tag comprises an acceptor and where FRET occurs when the two tags are in close proximity (claim 68), as stated in instant claim 18. Korlach et al. disclose a composition wherein the polymerase comprises Taq DNA Polymerase having a tag attached to an amino acid position at a specific amino acid of the Taq DNA polymerase that is less than 60

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Å from an incorporating nucleotide (claim 69). Korlach et al. disclose a composition comprising a polymerizing agent including a molecular tag covalently bonded to a site on the polymerizing agent and a deoxynucleotide triphosphate (dNTP) including a molecular tag covalently bonded to the  $\beta$  or  $\gamma$  phosphate group of the dNTP, where at least one of the tags has a fluorescence property that undergoes a change before, during and/or after each of a sequence of monomer incorporations due to an interaction between the polymerizing agent tag and the monomer (claim 70), as stated in instant claim 50. Korlach et al. disclose a composition wherein the polymerizing agent is a polymerase or reverse transcriptase (claim 71), as stated in instant claim 51. Korlach et al. disclose a composition wherein the polymerase is selected from the group consisting of Taq DNA polymerase, T7 DNA polymerase, Sequenase, and the Klenow fragment from E. coli DNA polymerase (claim 72), as stated in instant claim 52. Korlach et al. disclose a composition wherein the reverse transcriptase comprises HIV reverse transcriptase (claim 73), as stated in instant claim 53. Korlach et al. disclose a composition wherein the tags comprise fluorescent tags, and the fluorescence property comprises an intensity, wavelength, and/or frequency of emitted fluorescent light (claim 74), as stated in instant claim 54. Korlach et al. disclose a composition wherein the fluorescence property is fluorescence resonance energy transfer (FRET) where either the monomer tag of the polymerase tag comprises a donor and the other tag comprises an acceptor and where FRET occurs when the two tags are in close proximity (claim 75), as stated in instant claim 55. Korlach et al. disclose a composition wherein the polymerase comprises Taq DNA Polymerase having a tag attached to an amino acid position at a specific amino acid of the Taq DNA Polymerase, that is less than 60 Å from an incorporating nucleotide (claim 76).

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Korlach et al. anticipate the limitations in claims 10, 13-18, and 50-55.

The prior art 6,982,146 B1 (Schneider et al. ) is made of record and not relied upon; however, it is considered pertinent to applicant's disclosure.

### *Conclusion*

Claims 19 and 56 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claims 19 and 26 recite specific amino acid positions of SEQ ID NO: 11 from *Taq* DNA polymerase I for attachment to a tag which are not disclosed in the prior art.

Papers related to this application may be submitted to Technical Center 1600 by facsimile transmission. Papers should be faxed to Technical Center 1600 via the PTO Fax Center. The faxing of such papers must conform with the notices published in the Official Gazette, 1096 OG 30 (November 15, 1988), 1156 OG 61 (November 16, 1993), and 1157 OG 94 (December 28, 1993) (See 37 CFR §1.6(d)). The Central Fax Center number for official correspondence is (571) 273-8300.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carolyn Smith, whose telephone number is (571) 272-0721. The examiner can normally be reached Monday through Thursday from 8 A.M. to 6:30 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ardin Marschel, can be reached on (571) 272-0718.

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Any inquiry of a general nature or relating to the status of this application should be directed to Legal Instruments Examiner Tina Plunkett whose telephone number is (571) 272-0549.

**MARJORIE A. MORAN**  
**PRIMARY EXAMINER**

*Marjorie A. Moran*  
4/27/06

April 25, 2006